

CALIFORNIA GARDEN



IN THIS NUMBER

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By Alfred D. Robinson

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JANUARY, 1930

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DIFFICULT AND DANGEROUS

By Alfred D. Robinson

Perhaps some readers may remember that old time comic opera Mikado, and if so they may recall how Koko remarked that, "self execution was a difficult, not to say dangerous, undertaking," and yet I suspect that is what I am about to attempt in a mixed garden review and a peek into the future. I deem it a suicidal undertaking because I regard the past as a mere stamping up and down in the same spot and the outlook for the immediate future as a probable deepening of the hole. In saying this I shall please no one and displease a good many, for no class loves applause more than our garden folks. "Love me, love my dog," might well be changed to read, "Love me, love my garden," whether you like it or not.

The Saturday Evening Post is publishing articles illustrating dress modes of fifty years ago and less, and they look archaic, and yet the same publication gives us as the ultimate model gardens much older. Contrast the jigsaw ornate wooden houses of much less than fifty years since, with the eyebrowless Spanish (?) ones of today and look at the gardens attached to each, the old garden can stand the comparison passing well, it certainly had more individuality, though the latter is slicker, better groomed, so to speak. The old garden had a great variety of things, the new has more of fewer things. We have a few new flowers, more new shrubs, but they have displaced old ones and not always for betterment. As a community we have a large increase in the numbers of our gardens as we have had in homes, but it is doubtful whether there has been a corresponding increase in gardeners.

The past year has seen at least three major moves in our gardening which can be briefly noted as Spain, Rocks and Bent grass. Under the head of Spain we have a miscellany of walls and pots, more or less highly colored, and *Draecenas* and *Agaves* have been moved around at considerable expense. Even some old *Phoenix Canariensis* have traveled. Spain has also given us a small sun-baked patio and the outside staircase with a pathetic rock garden under it. I am wrong in saying Spain presented us with these bare walled squares, for their patios have arcades. In the Rock department

we have everything the mind can conceive and many things unbelievable of conception, walls, piles, terraces, and individual sowings, so to speak, and, without question, rocks have come to stay as a foundation feature in our gardens. In our locality we have a large proportion of canyon gardens where terracing is a necessity, as are rocks, and we are discovering the immense advantage of raising our beds in level plots to insure drainage in our sticky soils and to enable us to make our compost instead of having to try and make over the unkind mixture of the original. We have very beautiful rocks, specimen pieces worthy of being as carefully placed as a good picture in an exhibition, but it might be as well to do the placing so that they have an obviously utilitarian function, such as to keep the hose from dragging across flower beds.

The third major activity has been Bent Grass. This came to us touted as possessed of all grass virtues and no lawn faults. It grew quickly and smoothly and so thickly that no weed or other grass could abide in the same locality, even the ubiquitous *Bermuda* was its meat and it defied the rankest tyro of a golfer to hook a divot out of it. I purposely referred to the Bent as an activity for it is. If you are sufficiently active in watering, cutting, fertilizing, semesaning, etc., you can have a dream of a lawn but don't have any other occupation. Your lawn will give you all that you need.

Our gardens in 1929 have had the same flowers as in previous years,—pansies, stocks and sweet peas in the spring; roses a bit later, then asters, mums, zinnias, but why go over the list, you all know it so well. All these things for the most part have even been in just the same places. I am frequently chided because the same old thing is not in the same old place, though it is a basic gardening principle that the same flower should not occupy its old stand. We redecorate the interior of our houses, we move the furniture about, or our wives do till we cannot find our slippers or old hat, and yet having had our garden done when the house was built we deem it done forever and ever and it is a safe bet that

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that is the destiny of most of our gardens for 1930, and I have no expectation that this writing will make much difference.

I am obliged in order to continue my theme to suppose that you are willing to grant that our gardens might possibly be just a little improved, and in doing so I would strive to find out some of the reasons for this trifling deficiency. The main reason is that we are not as a community garden conscious. I borrow that expression, with thanks, from a young student aviator who told me that the eternal stunts in his profession were to make the public air conscious. I had expressed a certain fed-up feeling over the feminine air records, with and without garters, stockings, make-up, etc., but always with all the teeth and knees showing. This lack of garden consciousness is due to the automobile which discounts interest in anything stationary and that is the necessary status of a garden, but not all of it, a great deal comes from garden disappointments. As I have said before, folks get a garden and they say, "That's that," and forget it as they have forgotten, for the time, the heating and lighting systems, they don't stop to reflect that the garden is alive or if they do it is merely to realize it wants periodic drinks. The most of them leave it to that wonderful aggregation our by-the-day gardeners, and now perhaps we have got to the root of the evil. I hesitate to go on with the argument because there are many of these gardeners whom I know to be conscientious, hard-working fellows, but if Dr. L. J. Bailey can arraign this country for its lack of schools of horticulture and floriculture I perhaps may take a fling at my little piece for its lack of opportunities for training gardeners. There are few callings that demand a longer and more thorough training than gardening. If you go to our Park Superintendents, the head gardeners on large estates, the main propagators in the big nurseries you find the overwhelming majority came here from abroad and if you can probe into their life history it will start, "when a boy I worked in some famous garden under So and So, mentioning a prominent figure in the plant world. They all have been at it for a lifetime. They began at the bottom and went up slowly learning each step so well it became second nature. I ask you how any young chap can acquire such an education with us today and at the same time point out that to garden in California one must have gardened in California. All these cognoscenti to which I have referred will admit that their training abroad had to be supplemented with experience in our West, not only supplemented, but revised. As many know I am by way of being a Begonia crank, and frequently young persons of both sexes ask to come and work with me for a few months, six is the favored period, to learn all about

Begonias. No, they don't want any wages, just want me to give them an education. Of course they are a good deal smarter than I am, but even so they can hardly expect to learn in six months that little I have picked up in forty years. I merely cite this to illustrate the attitude of our young people to the garden question. My six month's graduate would go to the public saying and believing they were experts on Begonias. Let me try to give one reason why one season's experience can be only a little bit of a competent one. No two seasons are alike, the problems of two seasons with the same flower. A succession of seasons is the only sure means of gaining enough experience to be reasonably efficient. Take the season of 1929, because it was warmer and dryer than for many years, it presented some entirely new problems. And all this is preliminary to saying that a poor gardener is likely to make an indifferent owner.

A further fostering cause of indifference is the lack of initiative in our gardening, and yet as a general run our gardens present better chances for individual treatment than our houses. It would be insulting to most householders to suggest that the house be arranged just like somebody else's. I remember a friend saying, "I did so want to paint my house buff but of course I can't, Mrs. So and So has hers buff," and she painted it white. But ninety-nine per cent of garden features are just copies.

What will you do about it for 1930. Cuss me, of course, but don't forget that I think the gardens in Los Angeles are just as bad if not worse, and, Oh Boy! They must be terrible in Florida.

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GARDENS I HAVE VISITED

By C. I. Jerabek

(Second Instalment)

At the home of George O. Knapp, "Arcady," Montecito, is what appears to be a large redwood tree broken off about thirty feet up, but really made of slabs of wood with redwood bark on the outside, on the side away from the road is a door, and inside a circular stairway which leads up to a lookout, from there a redwood log hollowed out extends, spanning the driveway to a square built of stone with redwood logs around the outside edge, these are cut to resemble seats six feet in length. The floor is covered with redwood needles and oak leaves.

From here one goes onto a spacious lawn with trees surrounding it. Beyond this is a formal garden with a stone terrace and a magnificent view of the valley and hills, and here if one wishes to rest, are plenty of seats at hand. To the right an annual and perennial garden, then through a large iron gate one enters the rose garden surrounded by a hedge about four feet high, and from this garden is a small gateway opening onto the driveway which leads to the house.

At the side entrance of the Hale Place, Santa Barbara, are two large *Jubaea spectabilis* (Wine palms) one on each side of the gateway. In this garden is a fine specimen of *Leitchi Chinensis* (Leechee) the Chinese paper shell nuts; a beautiful olive tree of the white fruited type; a very fine shrub of *Gardenia Thunbergia* with its glossy leaves and large fragrant white flowers; *Oncoba Routledgei* with its drooping branches and yellow globular fruit which is about the size of the wild gourd (*Cucurbita foetidissima*) that grows along the highways.

Two very large *Sequoia gigantea* (California Big Trees); a *Lagunaria patersonii* about sixty feet high with four trunks each at least six inches in diameter at the base; *Azara microphylla* resembling a small-leaved elm; *Calodendrum capensis* (Cape chestnut), in the springtime this tree has large bunches of very attractive flowers, there is a fine specimen of this chestnut in Elysian Park, Los Angeles, near the Broadway entrance; *Ehretia elliptica* a large shrub of a weeping habit, rough bark and leaves, fruit yellow about the size of a small pea; Two tall *Agathis robusta* (Danmer or broad-leaved pine) about fifty feet high; *Pittisporum tomentosa*, large leaves, terminal clusters of small fragrant white flowers; *Pittisporum heterophyllum*, small yellow blossoms, this shrub is very good for banks and rockeries; *Hibiscus heterophyllus*, one of the largest flowering varieties; *Teucrium fruticosum*, a small bush, leaves green above, whitish beneath, flowers small; a fine clump of

Alstroemeria pulchella, full of its orange colored flowers; *Buddleia Lindleyana* with long spikes of deep velvety flowers; some fine bushes of *Melaleuca linarifolia*; a good looking hedge of *Ceanothus echinata*; a large group of *Agave attenuata*, (there are several of these in front of the residence on the northeast corner of First and West Washington Streets, San Diego).

At the rear of the house is a fine large clump of those beautiful palms, *Chrysalidocarpus lutescens*; a good size tree of *Algaroba Kiawe* with its fern like leaves and yellow globular blossoms; *Acanthus spinosa* (Bear's breech) a good lath house plant.

In the formal garden are *Achillea Millefolium rubrum* (Yarrow) a garden perennial with purple flowers; *Achillea filipendulina* (Fern-leaved) yellow flowered in dense heads; *Tradescantia virginiana* var. *congesta* (Spiderwort) purple flowers and green foliage, useful as a border plant; and many other interesting plants of the kind described in other gardens.

Mr. Deering, a capable manager is in charge of George W. Clyde's "Montemare," Montecito. The plants here of interest to me were both the pink and the white *Bouvardia*, I think the latter the more attractive looking; near a pool were some *Browallia speciosa* major with their large violet flowers; *Anagallis lenifolia* flowers the size of a nickel, the colors being the same as the wild ones, blue and brick red; an English rose, *Lady Egiteri* (Sweet briar) with its single pink flowers and bunches of red seed capsules; a new hybrid of *Buddleia Davidii* magnifica, and a clump of *Pittisporum Enclosa* resembling *Tobira* but more compact.

At the side entrance of the Nelson place is a beautiful court with *Veronica Chathamica* growing between the flagstones, along one side of the dwelling is a hedge about four feet high of *Rondeletia amoena*. On the front porch was a fine *Clytostoma callistegioides* in full bloom, the flowers are pale purple tubular in form.

Sloping gently away from the house is a bent grass lawn, on both sides of it are immense trees of *Pinus radiata* (Monterey pines). Down a few steps and then across the driveway is the formal garden, here among the specimen were iceland poppies, quilled asters and Sweet William hybrids in bloom.

In the garden of the Raymond place, "West-holm," Montecito, are two *Magnolia fasciata* (*Banna magnolia*) one at each side of the entrance. In another part of the garden is a fine bush of *Cantua buxifolia* with its trumpet shaped flowers. A beautiful water garden in

one corner, and an unusually large specimen of *Gunnera manicata* added to its attractiveness.

The National Geographic magazine of September, 1928, describes one variety of this plant, *Gunnera Masafuerae* with leaves that measure six to ten feet across and provides good shelter.

At Mrs. Orpet's home in Santa Barbara are many interesting plants, a waxy leaved vine, *Vitis incisa* (Marine vine): *Cytisus filipes* like a weeping willow with fragrant pure white flowers; *Abelia serrata*, pink flowers a little over one-half inch in length; *Bawkeria gardiana*, flowers shaped like *calceolaria*, white and very shining; *Clematis integrifolia*, flowers purple with yellow center; *Paratropia stelzneriana*, leaves palmately six-leaved and leathery; *Hibiscus coccineus*, very attractive large flowers; *Fomphrena pulchella*, very beautiful pink flowers similar to clover blossoms; *Abelia Schamansii*, a very fine shrub, flowers much larger than *Abelia grandiflorum*, shell pink in color; *Hesperaloe engelmanni*, leaves like a yucca with long spikes of coral flowers; *Wigandia scilla*, a bulbous plant with long spikes of white flowers; and many others of the more common kinds, besides eight hundred varieties of cacti and succulents.

AUSTRALIAN PLANTS

Australian Plants, by W. R. Guilfoyle, late director of the Melbourne Botanical Gardens, contains a quite complete list of trees and shrubs. The book gives their botanical names, color of flowers, height of matured plants, some striking characteristics, their habitats and also their common names—but nothing cultural is given.

The *Melaleuca* is the shrub that we call the bottle brush as its flowers resemble that little tool made of bristles twisted together by a wire. The *Callistemon* is another shrub with a flower very similar and also called bottle brush. The difference is in the structure of the stamens. Both of these genera are natives of New South Wales, parts of Australia, Tasmania and Queensland—some found in all these lands, some only in one or two. They are called by the common name of Tea trees.

We have in cultivation here only *Callistemon lanceolata* but of the *Melaleucas* we have ten of the twenty-five listed in this book on Australian plants.

The interesting fact learned from this list of *Melaleucas* is that a few are low growing, not exceeding five feet, and one variety is two feet and less. Low growing plants are scarce and it will be worth while to secure seeds of these low growing sorts.

Some of our well known varieties reach a height of 30 to 60 feet. Most of them grow from 12 to 20 feet.

The following are in cultivation in San Diego: *Melaleuca Armillararis* or *alba*, *decussata*, *ericifolia*, *genistifolia*, *hypericifolia*, *lateritia*, *stypheleoides*, *leucadendron*, *hugleii*, and *nesophylla*.

Of the above varieties we should grow more of *stypheleoides* for its height and its choice foliage that does not shrivel and is a good decorative green; the prickly tea-tree is its common name, though it is not a harsh foliage. *Melaleuca leucadendron*, a large tree with interesting white bark that flakes off, yellow flowers, will flourish in alkaline soil and near the sea. This is the source of the valuable Cajuput oil of commerce.

Melaleuca alba, *genistifolia*, *lateritia* and *hugleii* are all very desirable and of medium size for the first 15 years.

Melaleuca nesophylla has an excellent foliage quality and flourishes close to the sea. *Melaleuca tamarisciana*, four to five feet; *thymifolia*, one to two feet; and *Wilsonii*, six to eight feet, are the new ones recommended for cultivation because of their low growing habit.

There have been raised in Southern California, what are known as *Melaleuca* hybrids and are quite conspicuous in San Diego, having come here from a Santa Barbara nursery. The foliage is very individual and the growing tips are brilliantly colored red, pink or yellow in various shades. Very often the flowers take on the same color as the new leaves. This colored new growth is often as ornamental as the flower and gives the plant a double value. On the south side of the approach to the bridge in Balboa Park is a good assortment worth observing. All of these varieties of bottle brush are easily grown from seed. They are very drought resistant and excellent for mass planting.

Callistemon lanceolatus is the bright red well known bottle brush. *Metrosideros* is a genus so closely allied to the *Callistemon* that they are practically synonymous.

—K. O. SESSIONS.

ANCIENT LEAVES BEAR COLORS OF PREHISTORIC ERA

MEDFORD, Ore., Dec. 28—Leaves still bearing the colors of the autumn when they fell millions of years ago have been found in Wheeler county by Dr. Roy W. Chaney.

Preservation of the colors is attributed to minerals in the stone deposit where the leaves were buried. One virtually complete leaf was found, dressed in all its long ago autumn tints. Dr. Chaney says this section of Oregon was a semi-tropical jungle.

The Jan. and Feb. Gardens

By Walter Birch

January is a great rose planting month, and you have no doubt already prepared your soil by deep spading and application of well rotted animal manure. If you have not done so, make extra large holes, spading to a depth of at least a foot below the depth you intend planting your bushes, and mulch the surface around your bushes with well rotted cow or stable manure, to be gradually worked in.

Prune your old bushes and stimulate them for the blooming season, and of course, prune the bushes that you are going to plant.

January is also a good planting month for shrubs and ornamental trees, of the former *Chorizema ilicifolia* an attractive shrub about three feet high, with holly-like leaves and slender branches covered with orange red flowers, will bloom from January to June. *Genista fragrans* or Sweet Broom about six feet in height, blooming in early Spring and Summer in great profusion, also the taller one *Genista hispanica*, strong and fast growing, slender bright green branches, almost devoid of leaves, bears large yellow pea shaped very fragrant flowers, blooming almost continuously.

Grevillea thalmaniana, also an Australian shrub about five feet with small fine cut foliage and scarlet flowers.

Plumbago Capensis, one of the most satisfactory large spreading shrubs, covered most of the year with beautiful azure blue flowers, can also be used as a climber if pruned for that purpose.

These are a few of the shrubs which will give you satisfactory results if planted now.

If you are interested in having berries, rhubarb or fruits of various kinds for the home, it is a good time to plant them now. If you plant any deciduous fruit trees be sure and cut them back quite heavily, at time of planting, otherwise you will not make the right start to form a well shaped tree. For early and late peaches Early Crawford and Elberta are good.

Plums, Burbank and Satsuma, and of berries, Raspberries, St. Regis; Blackberries, Cory's Thornless, and the Loganberry. There is also a new berry called the Youngberry which combines the best characteristics of the Dewberry and Loganberry of which it is supposed

to be a cross.

It is an easy matter to grow your own berries by using a boundary fence and running a couple of wires on fence posts to support the vines.

In the flower garden put in some more *Ranunculus* bulbs, for spring flowers. These bulbs can be successfully planted until the end of February and will produce more satisfactory blooms if planted in the semi-shade.

Set out *Cineraria* plants now on the shady side of the house and enjoy these very handsome flowers of many rich colors in the spring and summer. Set out plants of Stocks (*Bismarck* type) and *Snappdragons*. Early planting of the latter will save you lots of trouble in combating rust, which is so destructive to these plants. Larkspur, double stock flowered can also go in.

The Japanese Lilies, *Rubrum*, *Tigrinum* and *Auratum* are very beautiful and do well round San Diego, particularly the *Auratum* or gold-banded. These do better in rich well drained soil and should be planted about eight inches deep. Set out more pansy plants, and be rewarded by continuous blooms of these pretty flowers for four or five months, and make a final planting of Early Blooming Spencer Sweet Peas for late spring and summer blooming.

MONTBRETIA IN PINE NEEDLE SOIL

Montbretia is generally reckoned very easy to grow, yet my plants in the borders are flowering very poorly this year, while a group growing without any cultivation whatever in the grass under an Austrian pine is producing the largest and finest flowers I have ever seen.

Is the soil produced by the rotted down pine needles (the tree is nineteen years old), particularly favorable? Probably this is the case, for I sometimes pare off the turf and use the next layer for potting, as it is so light and friable. Not only are the individual flowers unusually large and brilliantly colored, but they are borne on much branched stems, while those on the borders are mostly single. The effect of the bright mass of color under the sombre green of the pine is most attractive.—K. Bart-ram, Kent, in Popular Gardening.

The California Garden

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EDITORIAL

I am glad that, as usual, this magazine is late, by so being it has enabled me to read the multitudinous New Year's Greetings of editors and others and marvel over the sameness of it all. Still there persists the old assumption that between midnight of the last day of the old year and the first minute of the new an epochal change occurs and all men, nations, and languages have a chance to be bigger and better, a special chance because the old world still circles, arriving at the point from which it started to do it all over again. There is an awful lot of "Blah" in these New Year's messages, a sort of veneer under which every problem of the old is carried over into the new. I find it difficult to write because I am so fed up on reading what the other fellows have written and imagine you are too. No one is allowed to think for himself on any public matter and seldom upon any private one. If a new charter or a new road is proposed, the butcher and baker and candlestick

maker insist by spoken and printed word that we accept their view in the matter and real issues are buried under a spume of personal froth and by turning a dial you can get advice over the air on everything in life from birth to death, and on the care of your body from hair to toenails. So what is there for the editor of a small, but honest, garden magazine like California Garden to say? I would like to urge you to be yourself in some part of your garden. We lay a tremendous stress on the debt we owe to those who have pioneered, those who having done the thing, have made it easy for us to do it over again, but we don't often cuss them for having deprived us of the joy of discovery because we do not realize that this joy exists. Scientists may have other views about the cause of such slate wipings as the subsidence of Atlantis but I hold to the idea that the weight of precedent got top heavy and turned it upside down. Initiative became impossible and life not worthwhile in consequence. Of course this must not be taken too literally, but I ask any gardener to think of what a cruse of joy his garden would be if it were a bare spot and the future held the possibility of his first discovering all the wonderful things in plant life that every garden now has as a matter of course.

Quite recently I had a visitor from the Northern part of the State; she has a notable garden in which are a marvellous collection of plants assembled and planted with her own hands in a wonderful state of development, yet she almost wept with joy at being able to get a dozen or more little specimens that she did not have, saying, "Oh, I was so afraid I would not be able to get anything new this time."

So, for the New Year I do not wish you all the old things that you will get anyhow. You will have bloom in profusion for so it is ordained in California, and you will also have the worm in the bud, the rust that corrupts, and the mildew that no plant can endure. You will have to spray and irrigate and cultivate and fertilize. This thing will do well and that won't, and I am glad of it, for the care of your garden is the chief asset that it brings you. I wish you, dirt under the finger nails, callouses on your knees and a trowel where you can find it when you want it.

A sign of the season is in the mails, the seed and plant catalogue and I search in vain through them for anything essentially novel. Most of them feature a plant of English origin, that can be grown to a blooming stage in a few months but the description, however highly colored, leaves me quite cold, perhaps because I have read it many moons ago in the English papers and thought it unadapted to our conditions. It is apparent that the other side is attempting to cash in on our so-called

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Gardening boom, for everywhere we see foreign seed advertised as from the originator. One usually pays a bit more for this classification on the container, but our seed houses get their seed from the same stock bag and anyway heaps of imported seed originates around Lompoc, California. I said that novelty offerings seemed sparse, one might safely go further and charge that the list of species and varieties apparently was contracting. The Gardening game has been sucked into the vortex of Big Business and standardization has pushed variety aside in favor of enormous multiplication of fewer things. The result is shown in the continuous discussion in the Florists' Press of what to do about the recurring glut in the market. Some of the professionals go so far as to condemn the garden club movement as constricting the volume of sales because of homegrowing of flowers, but the generally promoted remedy is to restrict the cut at the growers' end. This matter involves a lot of angles and the one that comes in the scope of this magazine is the matter of the home garden disposing of its surplus flowers for sale, and that seems to be permissible from any angle. I suppose it would be rank heresy even to think that lots of our troubles come from our worship of mere Bigness, it cannot be very harmful, however, to regret that it is almost impossible today for an amateur to get a well balanced assortment of any plant family outside those in the commercial lines.

I publish elsewhere a letter from Mrs. Trask of the "Save the Pines League," without comment because I do you the justice of believing you can reflect on its contents just as well as I can, and the writer commands an excellent brand of language for the expression of thought.

Something short of a million people have asked for the name of that little moss that grows all over my lathhouse, and when told it was *Helxine Soleroli* (no guarantee given with any part of this title) have solicited something easier to say and remember, therefore I make this extract from "Better Homes and Gardens." "A good table centerpiece is *Helxine* (pronounced helks-seen), a little plant with small foliage, known as baby's chair, or Paddy's wig, or angel tears." I cannot imagine anyone failing to be suited somewhere in this selection.

Notice is out that John C. Wister will lecture under the auspices of the San Diego Floral Association the night of February 4, next, at the Wednesday Club House. Many of us remember his delightful illustrated lecture in the same place a few years back and will be

alert for further details.

I have before me the first number of the first volume of *The California Rosarian* Editor Walter S. Merrill and Associate Editor Silas B. Osborn. It is the organ of the California Rose Society whose Officers are Whos-Who in *The Pacific Rose World* and are nicely distributed from here to San Francisco. This magazine replaces the *San Diego Rosarian*, whose Editor, Forrest L. Heatt will take a deserved rest as President of the California Rose Society and with other honorary degrees. I have only one criticism of the *Rosarian* and that is it is too good for a first number, it leaves so little leeway to be better and bigger every time. Mr. Merrill personally announced to me rather merrily, that he also was now an editor, but I am betting him a President Hoover rosebush, though I don't know where I would get it, that by this time he knows it is no joke.

WILD ROSE IS FAVORED FOR NATIONAL FLOWER

With the vote nearing a million, the battle to name the national flower finds the wild rose in the lead says a statement by the American Nature Association. The supporters of the columbine, however, are making a determined rush in several western states to overhaul the leader. The balloting ends December 1. Here is the vote of the leaders to date.

Wild rose, 339,965; columbine, 143,235; violet, 78,309; goldenrood, 63,701; phlox, 29,252; American beauty rose, 12,230; daisy, 10,665; dogwood, 9,691; mountain laurel, 8,764; scattering, 18,330; total, 714,142.

In Colorado, a campaign is on for the columbine, the state flower.

Schools and women's clubs are evincing new interest reports show and it is expected that the total turned in will be more than a million before December 1. The states leading in number of votes cast so far are: Pennsylvania, Ohio, Wisconsin, Washington, New York. A number of others, among which are Delaware, Nevada, South Carolina, New Mexico, Kentucky, have campaigns underway and it is expected they will turn in a big number of votes.

Two thousand years ago in Athens the rose was crowned the queen of flowers. It is old, extremely old, this queen, and from time immemorial has never ceased to charm the world with its haunting fragrance and exotic beauty. The romantic songs and legends of the Greeks, the Persians and the Chinese testifying that this pampered darling of gardens the world over was cultivated in earliest times. The place it holds in the heart of man is strangely unusual in that no other flower has ever succeeded in usurping its sovereignty.

Patronize the Garden Advertisers.

NATIVE PLANTS IN GARDEN GROUPS

By Fidella G. Woodcock

(First of a Series of Three Articles)

Camassia Leichtlinii, the California Camass, of the Hyacinth group of lilies is the finest of all the camassias as a garden plant. Of this group it is said:

"California has several families of very beautiful, delicate bulbous flowers, unusual in their forms and coloring. These bloom for the most part in late spring. Now that it has become difficult to get many small foreign bulbs, we should use our natives more extensively in our gardens. Less grown perhaps because they need a good deal of water while blooming, are the camassias which are adapted to the north Pacific Coast but in California should be given the damper places on the margins of pools and rock gardens."

The original homes of our most serviceable ornamentals is an important point in plant culture and should be considered, for it is in their natural setting that wild plants in cultivation show their exquisite coloring. In the days of the Spanish possession, when the Scilla of the fields about Cadiz was called the "Wild Hyacinth" it was introduced into horticulture as "Peruvian Jacinth," because of its gem-like shades of color. Today, though the name of the gem has been discarded, it is still known as the "Hyacinth of Peru" but it is believed now that it is not a native of America. It was introduced into Cuba and Peru from the south of Europe, the typical hyacinth of the Mediterranean countries.

Geographical distribution of any one genus of plants, especially if a perennial is a determinant in planting not easily overlooked. Type locality is the index of steady quality of flowers in horticulture all over the world.

As pictured in colors in Curtis' Botanical Magazine, Vol. 103, *Camassia esculenta* var. *Leichtlinii* of the Andes in Bogota is a free-blooming spike of flowers, tall and quite narrow on a leafless scape. The color of the petals is creamy shading to milk white at the center. But the marked character that distinguishes this superb creation from other Hyacinthine genera is in its entirely distinct flower parts and the strong veins where the petals meet in the center. This veining throws out the opaque coloring with marvellous effect. This species was under culture twenty years in Kew Gardens before it was introduced as a garden plant by John Jeffries in 1873. Its name was given in honor of Max Leichtlin, a German horticulturist of Baden Baden.

Leichtlin's Camassia in California appears in different colors, white, light blue, dark blue, and purple, almost black. "Spreading regularly in the form of a star, withering and twisting over the capsule like a bon-bon; at length falling off whole."

As a squill the Camass, Indian Quamash, is known widely as an important food plant of the aboriginal Americans. The bulbs are large and globose, weighing four to five ounces. It is very common in meadows along the great rivers of the western plains and is found in the High Sierras. Like our California *Brodiaea* it is an abundant, much-loved small spring flower with thick straight leaves. In some of the hyacinths the flowers bloom before the leaves appear, without petioles. The stems are aerial supporting a loose raceme of bright blue blossoms, one of the most abundant prairie wild flowers.

There are two California species:

Camassia quamash of the Sierra Nevada;
Camassia Leichtlinii of the seacoast mountains in the Redwoods, extending into Canada.

Other Hyacinth lilies in garden culture are:

Eucomis, Cape Town;
Scilla, Wild Hyacinth of the Mediterranean region;
Ornithogalum, Star of Bethlehem; Arabia, North and South Africa;
Dipcadi, South African *Scilla*;
Galtonia, Summer Hyacinth;
Urginea, The Squill of Medicine;
Lachenalia, South Africa (having a small bulb);

Veltheimia, South African *Alettris* with grass-like foliage;

Muscari, Grape Hyacinth;
Chionodoxa, Glory-of-the-Snow; Asia Minor;
Hyacinthus, common hyacinth of South Europe and the Orient;

This group of bulbous plants has the largest number of genera of any of the lily tribes.

THE OLDEST SEQUOIAS

Readers of the New York Times recently have been enjoying a lively argument between Floridians and Californians as to the respective ages of Florida and California trees. Prof. Herman Kurz of the State College for Women at Tallahassee started the argument with the assertion that he had found, in Florida, a cypress fifteen feet in diameter which he believed to be 2800 years old and therefore, the senior of the California redwoods.

John R. White of Sequoia National Park couldn't stand that in silence. He wrote The Times that after investigation he was sure California still could claim to be the home of "the largest and oldest of living things." Continuing, he says: "There are many specimens of the California big tree, or *Sequoia gigantea*, which are thirty feet in diameter and over 3000 years old." Judge Walter Fry counted the rings on one lumbered big tree and found the age to be 3126 years. John Muir states that he found one in the Converse Basin, near Gen. Grant National Park, with a ring count of over 4000 years.

LATH HOUSE MATTERS

By Alfred D. Robinson

All day long I have been popping in and out of the lathhouse with a warm heart and cold feet, both the result of the recent glorious rain, a rain that slipped by the prophets and observers but nevertheless was more welcome than the flowers that bloom in the spring and for a fact there might have been but little blooming if it had not come. The day before I had been holding a hose hour after hour in the lathhouse and the longer I held and directed that puny stream the more hopeless it seemed, for the big trees outside had their roots like great open mouths posted everywhere and they drank and drank. I moved some Rex Begonias from a terrace that had been meticulously sprinkled every day for weeks past and an inch below the surface there was actual dust. I can talk of these things now they are over, but before the rain I had begun to feel, What's the use? And I have had over forty years of our variegated rainfall. That rain god is a humorist, he must sit up in his clouds and smile at man with his little ponds of reservoirs and thread-like pipe lines and chuckle over the heated arguments about the water supplies and when these bore him, as they must, he turns to the weather prophets and the observers and sees them write, "There is no rain in sight" and with his toe turns on the valve and it rains, and it did in spite of the barometer and all signs, and then my old reliable glass hurriedly went down but not in time to save its face, for without looking at it I sensed it was raining. On Point Loma because of our extra holiness we got an extra amount of moisture, a full inch and a half, and not a thing was touched, yet there was considerable hail, and the night of the seventh the thermometer dropped to 38. I have no experience with so low a temperature following abruptly after a December of extra warmth and sunshine, and I watch with some trepidation for the development of the next few days. A careful inspection the day after showed nothing except possibly some coleus were rather blue and wilted, but who expects Coleus to look happy out of doors in January. This reminds me to say that I shall raise more Coleus for next season, from seed, for I get sick of them, and the mealy bug loves them too much if I carry them over under glass. I want lots of them for I want to select the proper colors to go with my red rock in the

Family Patch. Last season I got a few that just fitted and now I suppose I shall go and spoil the whole effect by overdoing.

How the primroses and pansies and Nemesis liked the rain, they have all been living under protest but now they are real perky. You must remember these are mostly exposed to the weather where cloth has been removed down my walk that for economic reasons I call the "3 Ws" meaning Winding Wall Walk. So far I am extremely encouraged with the experiment of a removable roof.

I am supposed to tell you something to do in your lathhouse at this season and I deduce from the visits of a goodly number that they would plant and replant and do many an old thing in theirs but I know the right thing is to let it alone. Don't imagine I have no sympathy with this urge to be doing, especially after the rain, I have had to do something in mine, so I have swept it from A to Z though the chances are good that no one will see it but myself and a new fall of leaves will be there tomorrow, but it was that as a relief measure, or do something harmful, or bust. I have found the primroses a protection for the Begonias, a sort of shock troop that blunt the edge of the urge to be planting.

Then I am planting seed in variety. This year I have discarded all the dopes that are supposed to be anti- the thousand ills that threaten the seed between its sprouting and blooming and have poured boiling water on the mixture of leaf mold, loam, sand and charcoal but I have dipped in a solution of my pet Floranid because my seedlings have never grown as quickly as they should. I love the mechanical action of levelling and smoothing the compost in the boxes, the scattering of the tiny seed in rows topped by the labels bearing names and strange hieroglyphics which in a week or so I shall be unable to decipher. Then I make out a list all the same as an efficiency expert with columns for dates of germination percentages, etc., etc., and these I shall forget to fill except at odd times when I must do a good deal of guessing. But it is all in the game and a wonderful game it is, and to a man like this comes a request for information about growing tuberous Begonias in the open around Oakland as a commercial venture. Of course, I shall answer that letter as best I can because it comes recommended by a good

friend who should have known better, but I am a thousand miles from the point of view of the enquirer, I cannot consider Begonias as a cold business proposition, I cannot conceive of submitting myself to the monotony of producing enough tuberous Begonias to provide the most modest of livings. One hundred thousand tuberous Begonias and nothing else in a block would bore me to tears and yet such a thing can be seen every season in Santa Cruz County of this State. There is one aspect of such a sight that would appeal to me, I would like to have time and patience to go over every plant to select seed parents, for in that vast number there is one best plant and more than likely if accurate judging were possible there would be no tie in placing the first hundred. Think of the Flower Shows held throughout this land every season where classes come together, each entry selected from a vast number as the best and yet a tie in awards is hardly ever heard of.

In closing, let me congratulate you that I don't have to say "Water".

THE NEXT MEETING

Mr. Paul Avery of Grossmont, who has been studying rock gardens in England for the past two summers, will lecture on this subject on January 21, at 8 p. m., at the Floral Association's Hall in Balboa Park, just west of the Organ pavilion. The lecture will be illustrated with excellent slides and promises to be one of the very best of instructive lessons for San Diego on this popular subject.

JANUARY WEATHER IN SAN DIEGO

By Dean Blake

Of the months, January, without question, is the coldest. This is true in San Diego as elsewhere. Low temperatures are most frequent, and the mean temperature is at its lowest. The frost hazard also is at its most acute stage. It was in January, 1913, that the record minimum for the city of 25 degrees was established; the only month since records began that temperatures below freezing were recorded.

It is also our rainiest month as a rule, and stormy weather is frequent. Precipitation is almost always accompanied by strong southerly winds which veer to the northwest with clearing skies. January also holds the record for the highest wind velocity—44 miles per hour from the south in 1916.

Since 1850 when our rainfall record began, the average for the month has been 1.82 inches. Two Januaries have passed without rain, and five have registered more than 5 inches, namely: 5.56 in 1862, 5.05 in 1866, 6.95 in 1886, 7.33 in 1895 and 7.56 in 1916.

However, the percentage of sunshine is large, and many clear, mild days with temperatures over 70 degrees may be expected.

THE AMERICAN FUCHSIA SOCIETY

By Mrs. W. S. Thomas

This new department in the floral world is now fully organized with headquarters at Berkeley. One of the directors is now en route to Europe to be travelling until fall and will send home all new varieties discovered there.

There are now sixty varieties collected among members of the Berkeley region and more are being added rapidly.

Prof. Wm. Ewing, Assistant Superintendent of Oakland Schools, has fifty in his private collection.

Harry Green, of Monterey, Honorary President, is the real father of the new society. We have been corresponding with him for some time and he recently sent us a box of specimen blooms of 43 varieties. Our own collection numbers 36 although about half the number is recently rooted cuttings.

Fuchsias have struggled along under such various names,—or more often under no name. Just a mere description, that it has caused a serious handicap to one wishing to order new varieties. One of the main objects of the new society is to classify and name all varieties. Also to have some nurseryman in each locality to raise them as a specialty and send them out under a recognized name.

Mr. Gilson of 3601 Adams Avenue is planning to do this for San Diego and vicinity. He has always been a lover of these old fashioned flowers. Our President, Mrs. Greer, has been doing all she could for the past year to bring them again to public notice. Our Miss Sessions for several years has been highly pleased on discovery of a new kind. Mrs. A. D. Robinson of Point Loma, and Mr. Meadows on Stephens Avenue are also enthusiasts. Mrs. Rose Troth and others, are also in the list.

The dues are only \$1 a year and members will receive literature on culture, names and descriptions of all varieties now known, and of all new kinds as they are found or hybridized. And it is the plan, I am advised, that members will receive new varieties at reasonable prices.

Fuchsias prefer the north side of a building but are fairly agreeable to an eastern exposure, but to grow their best they must have much moisture, an acid soil and animal fertilizer. The new varieties, with blue as predominant, are much best on the north side, as the sun spoils the rich blue colorings.

They need heavy pruning during the dormant season. Their root system is rather near the surface, for this reason give no cultivation close to the plant.

GARDEN PROBLEMS

By Walter S. Merrill

It occurs to me to try to write a bit this month of conifers in the small garden. Such a huge variety is available for use in the gardens of Southern California, so varied are the uses to which they may be put with worthwhile results, and such great care must be exercised in properly placing them in a restricted design, that in a thousand words it is possible only to sketch roughly their many virtues and to hint at the many difficulties that may arise in their employment.

Nearly all varieties of conifers which we find offered for sale in the nurseries have three outstanding good qualities. First: They have a depth and richness of green which no other trees give us. I do not mean that there are no other trees so dark in tone, for the conifers are not, by any means all very dark. But there is a richness of color, which gives a feeling of solidity, vitality and permanence, that is generally lacking in the so-called broad-leaved evergreens. As a contrast to bright colors or white, nothing is so excellent, whether we use the almost black yews, the vivid green cypresses or junipers, the golden-green *thuya beverlyensis*, or the very glaucous *cedrus atlanticus* glauca, Arizona cypress or Kloster's Blue Spruce.

Second: They have beauty of form, not only as mature plants, but as very young plants as well. Nearly all conifers assume, at a very early age, the characteristic shape of the mature tree, whether it be the columnar shape of the Italian Cypress or the Irish Yew, the conical form of the Redwood or the Star Pine, or the broad-spreading and drooping habit of the *taxodium mucronatum*. This enables one to plant a small, inexpensive specimen that immediately will be a decidedly beautiful addition to the garden. A *cedrus deodora* four feet tall is a graceful, lovely plant, which would be worth while if it never grew another inch. Even small pines, once they have begun to make side branches, are admirable.

Third: They grow well in this climate. Conifers generally are not susceptible to sunburn, require but a fair amount of water (yet will stand almost any amount if they are blessed with well-drained soil), do not demand heavy and expensive fertilizing, resent any labor with the pruning shears, and in almost all cases are not harborers of pests.

Their uses in the well designed garden are many. Massed as a background, the darker

green conifers cannot be surpassed for enhancing the appearance of distance and depth. Of course, their size, when mature, renders most varieties unsuitable for this use in very small gardens; however, some kinds, which will stand severe pruning, are excellent under such conditions. In massing conifers, great care should be taken that varieties of different shapes be combined so as to give the solid, impenetrable appearance desired without undue crowding, as many varieties suffer when their branches become interlocked with others. Those which develop tall, bare stems should be screened by the shorter varieties which retain their lower branches.

Where conifers are supremely successful is in their use as specimen plants, either singly or in groups of two or three, on a lawn or open space, with enough room for each to develop to its utmost perfection, and where an unrestricted view may be had from several sides. A good garden, however small it may be, should have one or more such plants. They are the chief glories of a neighborhood. San Diego has many noteworthy specimens; and twenty years from now, when the thousands of small trees, lately planted, reach their full growth, the city will be beautiful with them, and our unfortunate lack of sidewalk trees will then not be so keenly noticeable. On Golden Hill are many fine old *araucaria excelsa*, and the specimen on Mr. Frank Strausser's lawn, on Sunset Boulevard, was judged, in the recent garden contest, to be the finest tree in the city. Mr. Marston's Canary Island Pines are very lovely, and add enormously to the beauty of his place. The Monterey Cypresses in the Balboa Park lawn, above Laurel Street near Sixth, are, to my mind, the finest things in the park. We have a Redwood in our own garden which, if no misfortune befalls it, will be a wonderful thing in a few more years. Mr. Guymon, on Sunset Boulevard, has some very fine partly grown specimens in his lawn. Unfortunately, they are planted in a hit-or-miss fashion, and, when full-grown, will be much too close together, and their beauties will be hidden. If all but three or four were removed, the planting would be far more effective, and the trees would develop into much grander specimens. Take care, always, in planting for specimen trees, to avoid over-crowding. Not only must the trees have ample room, for perfect growth; but the eye of the beholder should be allowed to feast on the beauty of one tree

or group, without being distracted by the sight of several wholly unlike specimens. A tree of outstanding merit should have a setting like that of a fine statue or a well hung picture.

Another use of conifers,—the small-growing varieties only,—is for planting here and there as accent points in herbaceous borders, bulb-plant borders or beds, rock-gardens or cactus gardens. Thriving under almost all conditions of soil or water, they grow amid the alien plants, and lend a variety which is very desirable. Mr. Tom Hamilton's cactus-garden has many small conifers scattered through it, with excellent effect. Dwarf upright conifers and the various prostrate types are the dominant features of many very fine rock gardens. To many sorts of gardens these sturdy evergreen trees and shrubs lend a feeling of sturdiness and permanence that can be gained in almost no other way.

It is not my intention to discuss here the good and bad qualities of the different varieties, or to give a list of names. For such a list, with descriptions and pictures, it were far better to turn to well illustrated catalogues, such as those issued by the Armstrong Nurseries of Ontario, the Beverly Hills Nursery of Beverly Hills, or the California Nursery of Niles. Remember, however, that, in giving the height or spread of a mature tree, the measurements are for a perfect tree, grown under ideal conditions for a great many years; and do not be disappointed if your Canary Island Pine doesn't reach eighty feet, or your Redwood a hundred and fifty, in the next ten years. Take care, rather, that you allow ample space for your tree to develop to its perfection; then have patience; and soon you will have something which will give you satisfying beauty for the rest of your lifetime.

DWARF TREES IN POTS Are Quite Easy to Grow

The art of cultivating dwarf trees in pots was introduced from Japan, where most of the Japanese have only tiny gardens. By means of these pigmy trees, however, they are able to produce some wonderful effects. It takes years to cultivate a dwarf tree according to the Japanese way; consequently they are expensive in this country. Some of these trees, scarcely a foot high and contained in a tiny pot, are several hundred years old. Fortunately, there is no secret about the method of their cultivation which is so fully described in Japanese horticultural books that anyone can easily succeed in growing them.

The young shoots are pinched back "from April to the middle of June, and always with the finger and thumb." Thus the growth of the tree is prevented. In summer just sufficient water is given to keep the soil moist, and in

winter the supply is reduced. Manure is given twice a month in spring and autumn, but not in the hot summer weather, and finely powdered oil-cake is recommended for this purpose. The trees are repotted every second or third year, and then about a third of the old soil is worked away from the roots with a sharp-pointed stick. Fresh soil is added and the tree is not transferred to a larger pot until it is absolutely necessary.

The Chinese have another method of growing pigmy trees. They take an Orange and cut a hole in the skin about the size of a quarter, taking out the pulp and juice. Then they fill the empty skin with coconut fibre, fine moss, and charcoal, just stiffened with a little loam, and in this plant an Acorn, Date stone, or the seed of any tree they want to grow in dwarf form. The seed is put in the centre of the hollow Orange skin and the compost is made firm around it. Then the Orange is stood in a tumbler or vase in a window and the soil moistened occasionally with a little water through the hole and the top sprinkled with fine wood ashes.

In time the tree pushes up its stem through the hole and the roots push through the Orange skin. All these roots are cut off flush with the skin, and this process is repeated at frequent intervals for two or three years. By then the stem of the tree will have grown about four or five inches and will have assumed the stunted, gnarled appearance of a very old tree. When the roots are cut for the last time, the Orange skin is painted black and varnished.

The same effect can be obtained by growing oaks and other trees in a mixture of peat and loam in thumb pots. The trees should be turned out of the pots at periods of six weeks and the ends of all roots showing beyond the compost pinched off. The production of dwarf trees is chiefly due to the constant and systematic checking of the root growth.—P. H. Arundel in *Popular Gardening*.

IRIS PALLIDA DALMATICA

This stately Iris is almost too well known to need description. It was known in cultivation as early as in the seventeenth century. Great as is the number of Irises of high quality that have been brought out of late years, this fine thing holds its own as one of the best and loveliest. It is tall and graceful. Each bloom measures a good four inches, both high and wide, and is set at a fair distance apart. Fortunately for raisers, it is a good seed-bearer, for it is the parent of many of the newer kinds. It is also one of the best for border planting, for, unlike the greater number of the Bearded Irises, it holds its handsome sheaves of leaves well into the late summer.—G. I. in *Gardening Illustrated*.

REDWOOD FIRE LOSSES

RESULT OF COMPLACENCY

BERKELEY, Jan. 16—More adequate fire protection is paramount to the further expectation of private forestry effort, and the public must bear its share of the burden of prevention and suppression or do without forests. In making this statement, Prof. Emanuel Fritz of the University of California Forestry Division, says a general and sincere effort has been made in the pine region to keep fires out of cut over lands and virgin timber but that in the redwood districts fires have so long been considered a necessity or a proper thing that they have become a tradition and are looked upon with complacency.

Pointing out the heavy damage of the past year, in the redwoods, which he says was the worst on record, Professor Fritz says apathy toward fire was general and incendiarism was rampant, stating that, "Even those timber owners who went on record earlier as being in favor of complete protection made only feeble efforts to control fires that burned in their lands. Fires last year burned into redwood timber that had not been visited by fire for perhaps 200 years."

Exemption Held a Mistake

"The State Legislature," says Professor Fritz, "made a grave mistake when, a few years ago, it exempted the redwood region from certain provisions of its fire protection laws. The fire hazard in the redwood region is not as high as it is in the pine region, damage is not so great, and fires are relatively easy to control. Usually the weather is unfavorable to the rapid spread of flames but when the occasional emergencies do come they find the local agencies unprepared.

"Furthermore, the very general but mythical belief that fire cannot hurt the redwoods and that fires are a good thing for the old growth, cause action to be delayed until it is almost too late. Slash fires may be called controlled fires but the men in charge as well as their superiors generally feel that no harm is done if they run into uncut timber and therefore do not exercise proper prevention to keep them in bounds.

Experimental Plots Destroyed

"Fires have already taken their toll of forest plantations, and some valuable experimental plots have been wiped out. State rangers and company employees do a lot of hard fire fighting in the region but they are too few and a portion of the public is all too ready to defeat their efforts. Foresters who have grappled with 'light burning' in the pine region do not know what it is until they have seen it in the redwoods.

"The role of fire in the redwood region, past and present, deserves intensive study. My own

opinion, based on nearly ten years of observation, is that fires have no place in the redwoods unless used to consume slash or to clear land under adequate control and by methods less destructive to unmerchantable trees than the present."

Attitude Better in Pine

While there are some operators still disinterested and careless and hostile to the protection policies of the federal and state agencies in the pine region, most of them are heartily in favor of complete fire protection, says Professor Fritz. At present all the principal operators and holding companies, he says, are co-operating in protection matters.

"The protection effort," says Professor Fritz, "is now greater and more successful than ever before but it is still deplorably inadequate. The public should shoulder the largest part of the burden, just as it does in city fire protection. Forest protection will never be effective if left to the vagaries and varying practices of neighboring owners alone."

INDIA SCIENTIST DEMONSTRATES LIFE
IN PLANTSLeg of Frog and Leaf of Mimosa Made to
Show Exactly Same Reactions

CALCUTTA, Dec. 28—Remarkable demonstrations of Sir Jagadis Chandra Bose's apparatus for recording the life growth of plants and the establishment of his thesis of identical life-mechanism in the animal and vegetable kingdoms, have just been witnessed at his research institute in Calcutta.

During the tests the leg of the frog as well as the leaf of the mimosa, produced similar dancing movements under nervous excitation.

A plant was made to inscribe its throbbing pulsations and the pulse-beat under the action of poison appeared like the flutterings of a creature struggling for life.

The heart beat of a frog had just come to a stop, the animal being to all intents and purposes dead. The injection of a few drops of an Indian drug of high potency caused revival of the heart's action and the animal was brought back to life.

A large number of Indian plants are being discovered to have medicinal properties, the existence of which never had been suspected, and whose efficacy in reviving a failing heart appears to be exceptionally high. Further progress necessitates the isolation of active principles from plant extracts, as well as prolonged investigation for the standardization of the dose on human subjects.

The results would, it is believed, lead to the establishment of a new pharmacopeia for the relief of humanity.

FLOWERS FOR SHADY PLACES

Generally speaking, those parts of the garden which receive no sun, or very little, are neglected because of the prevalent idea that few plants will flourish in the shade. There are, however, many kinds which do better when growing where they are protected from the fiercest rays of the sun. No doubt the failure of most plants which have been planted in sunless spots is due to the unsuitability of the soil, for often it consists of nothing but heavy clay, whereas most shade plants revel in leaf-mould. Therefore, before any attempt is made at planting, the soil must be well broken up and liberal quantities of humus used to lighten it.

If the area of the shaded portion of the garden is large enough to include shrubs, you may plant such shrubs as the Snowberry (*Symphoricarpos racemosus*), which has small ovate leaves and dainty pink flowers, followed by large white berries; *Berberis aquifolium*, an evergreen with shiny leaves, golden yellow flowers and purple berries; also *Leycesteria formosa*, a plant which grows about six feet in height and produces large pendulous trusses of purplish-white flowers, which produce deep red berries. You may also plant *Bambusa palmata* if the position is not too much exposed and the Snowball Tree (*Viburnum opulus*), as well as such evergreens as *Aucuba* and *Euonymus*. Ferns must, of course, be represented: *Allosorus crispus* (Parsley Fern); *Asplenium* (Lady Fern); *Nephrodium dilatata*, with evergreen fronds, two to four feet long; *Osmunda regalis* (Royal Fern) having fronds averaging six feet in length and *Scolopendrium vulgare crispum*, a beautifully crested form of the Hart's Tongue Fern.

Amongst herbaceous plants Foxgloves reign supreme for shady spots. The "Shirley" strain consists of a variety of colors, ranging from white to deep pink, and is heavily blotched with cream and maroon. Solomon's Seal (*Polygonatum multiflorum*) with its long arching sprays of green-tipped, pendulous white bells, revels in such a position and forms a delightful companion to the Forget-me-not-flowered *Anchusa* (*myosotidiflora*). *Dielytra spectabilis* with dainty fern-like foliage and sprays of pendulous pink blooms, from the centers of which the tear-shaped corollas protrude (hence the popular name of Angel's Tears) is a plant which is only seen at its best when growing in a moist shaded corner.

Other plants suitable for the purpose are *Funkia Sieboldi* (Plantain Lily), mauve spikes of bell-shaped flowers; *Tradescantia virginiana* (The Spider Flower), large blue flowers amongst long narrow sprawling leaves; *Saxifraga umbrosa* (London Pride); Primrose, Spiraeas, and spring-flowering bulbs, such as Narcissi and Snowdrops.—G. F. Gardiner in Popular Gardening.

RAINFORD FLOWER SHOP



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NEW INSECTICIDE MAY BE PRODUCED IN THIS COUNTRY

In the great war with insects man has a new and promising weapon in the form of rotenone, a crystalline material which is both a contact and stomach poison. This insecticide is especially welcomed by scientists at this time, when they are looking for organic compounds to take the place of lead arsenate which leaves an undesirable residue on fruit.

The demand for organic insecticides is much greater than the supply, according to Dr. R. C. Roark of the Bureau of Chemistry and Soils, United States Department of Agriculture. The most widely used materials in this class are nicotine and pyrethrum flowers. Nicotine is derived only from the stems and floor sweepings of tobacco. Pyrethrum flowers are grown to a limited extent in California, but practically all of the 11,000,000 pounds used annually in this country is imported from Japan. This plant has been grown in the United States, but the cost of harvesting the flowers is a decided handicap to its production.

This leaves rotenone in a field where there is little competition. This material has been obtained mostly from the roots of derris, a plant grown in the rubber plantations of Sumatra and the Malay Peninsula. Another promising source of rotenone is "cube", a

wild plant which grows in the mountains of Bolivia and Peru. The Indians of those countries use the roots of this plant to poison fish. Small amounts of the plant thrown in streams stun the fish sufficiently for the natives to catch them with spears or nets.

Due to the limited supply of nicotine and the dependence upon Japan for pyrethrum flowers, scientists of the department are looking to the production of insecticides of plant origin in the United States. Derris and cube are both promising sources of rotenone, although cube contains nearly three times as much of the active ingredient. Careful tests have shown that roots of this plant contain as much as 7 per cent rotenone.

Since derris is grown in the rubber plantations of the Malay Peninsula, it is thought that this plant might be grown in the southern part of Florida. Cube grows at high altitudes in Bolivia and Peru and might be suited to the Southwestern States. Very little is known about the plant at present. Its correct botanical name is not even known, but its action on aphids and other insects warrants a thorough study as to the possibilities of growing the plant in this country.

ROOT DEVELOPMENT AIDED BY CHEMICAL

By L. C. Chadwick

The first of this series of articles appeared in the November 28 issue of The Florists' Review and was reprinted in California Garden, and discussed in some detail the results that can be expected from the use of some chemicals as stimulants to root formation and growth of evergreen cuttings. The method discussed in the first article was to place the cuttings in the solution for a period of about twenty-four hours before they are placed in the rooting medium. In this article will be discussed the use of one of the chemicals mentioned before in another way.

Potassium permanganate (KMnO_4), the chemical that has given the greatest stimulation of any used, will give satisfactory results, not only when the cuttings are soaked directly in the solution, but also when the solution is applied directly to the rooting media with the aid of a sprinkling can before the cuttings are inserted. This method of application came about after it was fully determined by the earlier tests that the permanganate solution actually did stimulate root formation. It was then thought that if the solution could be applied to the rooting medium before the cuttings were inserted and the same beneficial results obtained, it would be more readily adaptable to commercial scale propagation.

Under Various Conditions

Many tests have been conducted using the chemical in this way, and about twenty different evergreen plants have been used. A number of different strengths of the chemical have been tried. From the results that have been received, it is doubtful if one concentration can be given that will be the best for all kinds of evergreens. It is possible to say, however, from these results that have been obtained that a six per cent molecular solution applied at the rate of two liters per square foot, which is equivalent to one pound of KMnO_4 to fifteen gallons of water, applied at the rate of two quarts per square foot of rooting surface, has given the most satisfactory results. It has been shown by a number of tests that the influence of the permanganate solution applied in this way is in some way tied up with the pH (acid) reaction of the rooting medium. For this reason the chemical applied to different media, as sand and peat moss, or even to different types of sand, may not give the same or constant results. Furthermore, it has been found that different reactions will occur with the same kind of cuttings taken at different periods of the year. For these reasons, then, it is difficult to lay down a rule that will give similar results under the different conditions and methods of handling that exist

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The chemical is easily applied. The simplest method is to use a sprinkling can and put on the right amount of solution to an allotted space. One precaution should be considered. It is necessary that as even an application be given as possible. See that all parts of the bench receive an equal amount of the solution and that all of the medium has been moistened. Oftentimes the medium will require some mixing to get an even application of the solution. This is easily done with a shovel.

Another method that has been used advantageously is to use large galvanized-iron buckets that will hold about five square feet of rooting medium. The right amount of the solution is added to the medium in the buckets, mixed thoroughly and then put in the bench. This method has been used almost entirely when the chemical has been applied to a granulated peat moss medium. An application of the above strength of solution will cost about 50 cents per 30 square feet of bench surface.

SCION OF GREAT WASHINGTON ELM THRIVES ON PACIFIC COAST SOIL

**Twin-Trunked Landmark on Campus at Seattle
Now Rearing a "Grandson" to Send
Back to Cambridge**

SEATTLE, Wash.—A simple memorial tablet set in a granite boulder under an elm is more suggestive of Cambridge, Mass., than of Seattle, Wash., and sure enough, the sight-seer reads that this young elm on the campus of the University of Washington is a "scion" of the historic Washington elm at Cambridge marking the spot where General Washington took command of the continental army in 1775.

The thriving young scion has twin trunks and "thereby hangs a tale." In its branches are two stout wooden boxes, neither bird houses nor squirrel cages, and that is still another tale.

The story goes back 30 years ago when Arthur J. Collins of Spokane, Wash., an alumnus of the University of Washington, was doing graduate work at Harvard. Mr. Collins visited the historic elm and thought it would be appropriate to get a scion to plant on the campus of the Washington State University. There was considerable red tape, but Cambridge authorities finally approved his plan.

The first scion, and the second, did not prosper and many more were tried until two of them took root and grew. In 1902 the two were planted close together in the hope that one, at least, might prosper. Both took root and grew, which accounts for the double trunk. In 1925 a tablet was placed under it by the

Washington State Historical Society.

About a year ago Cambridge authorities asked that this thrifty son be returned to Cambridge to perpetuate the memory of its famous father.

The young university was delighted to be able to serve in such an historic cause, and if it hesitated about sending the young elm back it was not for selfish reasons but because tree experts did not wish to risk losing it for history by uprooting it and shipping it so far away.

They thought of a better plan and Cambridge agreed. Two boxes, filled with soil, were placed in the branches and twigs were bent into the dirt and left to grow into sturdy grandsons of the historic Washington elm. When they are grown to proper size for transplanting and shipping they will be sent back.

PRESERVE AUTUMN-TINTED LEAVES

**In Their Natural Colors by Following This
Method**

Everyone admires the lovely tints of autumn leaves and regrets that, even if gathered and kept with the utmost care, they soon shrivel and fall from the branches. By following a simple plan it is easy to secure sprays of the most beautiful foliage that will retain their color and prove valuable for decoration during the winter.

The first step is to prepare a solution of glycerine and water allowing one tablespoonful of the former to nine of the latter, mixing well together. The mixture is best poured into a wide dish. The leaves are collected and pulled gently off the boughs which must be kept. Every leaf must be well pressed between the pages of a book or, better still, between two sheets of white blotting paper on which some weight is placed. One or two days might be allotted for the pressing. Then take the pressed leaves and lay them carefully in the glycerine mixture. Leave them until they are soaked through and through, then take out and allow them to drain. After this the leaves should be well dried between more blotting paper, or two smooth towels, heavy books being piled above to weight them and keep them flat. In a day or so the leaves will be quite dry and they will be in a very flexible state. They will now never shrivel and will retain the full brilliancy of their colors for an indefinite time.

The leaves should now be replaced in their proper position on the boughs. For this purpose, strong gum is used, a spot being put at each point where a leaf would come and, after allowing a little while for the adhesive to thicken somewhat, the stalk of the leaf is pushed into the gum. At any time, until the gum is quite hard, the leaf can be twisted about into its most effective position.



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